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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,422	06/10/2005	Michael Hulskemper	112740-1087	3591
29177 7590 12/05/2008 BELF., BOYD & LLOYD, LLP P.O. BOX 1135 CHICAGO, IL 60690				
EXAMINER				
PHAM, TUAN				
ART UNIT		PAPER NUMBER		
2618				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,422

Applicant(s)

HULSKEMPER, MICHAEL

Examiner

TUAN A. PHAM

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-9 and 11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 7-9 and 11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 09/02/2008 have been fully considered but they are not persuasive.

In response to applicant's remark on page 4, Applicant argues that Bank does not teach "display window" as recited in claim 7.

In response to applicant's arguments as stated above, Examiner respectfully disagrees with the Applicant's argument. Bank clearly teaches the display window 66 as show in figure 1.

Base on the above rational, it is believed that the claimed limitations are met by the combination of Bae, Kubo, bank, and Mori.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added subject matter of "a display window for emitting audible signal and an operating element for exiting bending waves in the plate-

like element" to dependent 7 is considered new matter because the specification as original filed does not provide support for such limitation. In addition, Examiner has carefully reviewed through out the specification and did not find any disclosed that relate to the meaning of the newly added limitation in claim 7. Examiner is further requested the applicant please explain the meaning of the newly added limitation in the next respond.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, the recitation "a display window for emitting audible signal and an operating element for exiting bending waves in the plate-like element" renders the claim indefinite because it is not clear as to what are being claimed. How the display window 7 in figure 2 of the applicant 's specification be emitting audible signal and an operating element for exiting bending waves in the plate-like element? For the purpose of examination, the above recitation is interpreted with the broadest reasonable interpretation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 7-9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bae et al. (US Pub. No.: 2004/0203496, hereinafter, "Bae") in view of Kubo (US Patent No.: 5,883,966) in view of Bank et al. (US Pub. No.: 2003/0059069, hereinafter, "bank") and further in view of Mori (US Patent No.: 6,539,208).**

Regarding claim 7, Bae teaches a mobile telephone comprising (see figure 2):

a first and a second housing part (see figure 2, sliding housing 20, main housing 10, [0022]), wherein each housing part can be displaced by sliding with respect to one another in such a way that respective sections of each housing part are exposed as a result of the displacement (see figure 2, [0022]),

a keypad located in the first housing part (see figure 2, keypad 12, main housing 10[0022, 0025]); and

the bending wave loudspeaker travels on a path that is parallel to the keypad when each housing part is displaced by sliding (see figure 2, speaker 22, keypad 12, it is clearly seen that speaker 22 travel on the path that is parallel to the keypad 12 when the sliding housing slide).

It should be noticed that Bae fails to teach an exposed section of the second housing part comprises an internal acoustic area defined by a wall located within the second housing part that separates the acoustic area from the remainder of the second housing part, and speaker and operating element are located on an outside surface of the acoustic area. However, Kubo teaches an exposed section of the second housing part comprises an internal acoustic area (read on air chamber) defined by a wall located within the second housing part that separates the acoustic area from the remainder of the second housing part (see figure 5, speaker 18, speaker case 16, air chamber 20, col.3, ln.4-31), and speaker and operating element are located on an outside surface of the acoustic area (see figure 5, speaker 18, speaker case 16, air chamber 20, col.3, ln.4-31, it is obvious that the speaker system that is included a piezoelectric resonant element).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kubo into view of Bae in order to improve acoustic characteristic of speaker and free from deterioration of conversation quality as suggested by Kubo at col.1, ln.45-48.

Bae and Kubo, in combination, fails to teach a bending wave loudspeaker comprising a plate-like element and display window for emitting audible signals and an operating element for exciting bending waves in the plate-like element. However, Bank teaches a bending wave loudspeaker comprising a plate-like element and display window for emitting audible signals and an operating element for exciting bending

waves in the plate-like element (see figures 1& 5, 10, 12, plate-like, active piezoelectric resonant element, display window 66, [0061, 0078, 0081]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Bank into view of Bae and Kubo in order to improve the input energy as suggested by Bank at col.1, [0007].

Bae, Kubo and Bank, in combination, fails to teach speaker is that faces away from a user. However, Mori teaches speaker is that faces away from a user (see figure 5, speaker 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mori into view of Bae, Kubo and Bank in order to provide easier-to-handle and good visibility for the user as suggested by Mori at col.2, ln.47-50.

Regarding claim 8, Bank further teaches a material for the plate-like element is optimized for the purpose of excitation with bending vibrations (see [0004, 0057]).

Regarding claim 9, after combine, Mori teaches a keypad arranged in the section of the first housing part that is exposed by the displacement (see figure 5, keypad 41 is located on the body 1). Kubo teaches the plate-like element of the bending wave loudspeaker is arranged in the exposed section of the second housing part (see figure 5, speaker 18 is located on second housing).

Regarding claim 11, Bank further teaches the separating wall mechanically protects the interior of the second housing part against buckling of the plate-like element (see figure 2, upper and lower beam 88 and 90).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have question on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/TUAN A PHAM/

Primary Examiner, Art Unit 2618